UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,697	10/23/2003	Krzysztof W. Przytula	HRL135	9790

28848 7590 09/08/2006

TOPE-MCKAY & ASSOCIATES
23852 PACIFIC COAST HIGHWAY #311
MALIBU, CA 90265

EXAMINER	
PATEL, SHAMBHAVI K	
ART UNIT	**PAPER NUMBER**
2128	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,697	Applicant(s) PRZYTULA ET AL.
	Examiner Shambhavi Patel	Art Unit 2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/22/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-68 are pending.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 22 March 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the Examiner has considered the IDS as to the merits.

Duplicate Claims

Applicant is advised that should claims 2, 19, 36, and 53 be found allowable, claims 10, 27, 44, and 61 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re*

Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The preambles states "A method for automatically generating…" but the body of the claim does not depend on this.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claim 1-68 are rejected under 35 U.S.C. 102(a)** as being clearly anticipated by **Thompson et al. ('Evaluation of Bayesian Networks Used for Diagnostics', March 2003),** herein referred to as Thompson.

Regarding claims 1, 18, 35, and 52:

Thompson is directed to a method for automatically evaluating Bayesian network models for decision support comprising:

a. receiving a Bayesian Network (BN) model **(section 2.2 'Bayesian Network Models')** including evidence nodes and conclusion nodes **(section 2.2 'Bayesian Network Models' paragraph 6)**, where the conclusion nodes are linked with the evidence nodes by causal dependency links **(figure 1)**, and where the evidence nodes have evidence states and the conclusion nodes have conclusion states **(section 2.2 'Bayesian Network Models' paragraph 6).** The *'evidence nodes' in the instant application are analogous to*

the 'observation nodes' in the prior art and the *'conclusion nodes' in the instant application are analogous to the 'component nodes' in the prior art.*

b. setting the states of the conclusion nodes to desired conclusion states **(section 3.2 paragraph 4 steps 1 and 2)** and determining, by propagating down the causal dependency links, a corresponding probability of occurrence of evidence states of the evidence nodes **(section 3.2 paragraph 4 steps 3.1 – 3.4)** and producing, from the probability of occurrence, a plurality of samples of most likely states of the evidence nodes **(section 3.2 paragraph 4 step 3)**

c. setting the states of the evidence nodes to states corresponding to the plurality of samples of the evidence states **(section 3.2 paragraph 6 step 1)**, and propagating the evidence states back up the causal dependency links to the conclusion nodes, to obtain a plurality of probabilities of the resulting states of the conclusion nodes **(section 3.2 paragraph 6 step 2)**

d. outputting a representation of the plurality of the probabilities of the states of the conclusion nodes **(section 3.2 paragraph 8)**

Regarding **claims 18 and 35**, Thompson is directed to an apparatus for performing the above steps **(section 4.4),** specifically a Dell Dimension 8100 computer.

Regarding **claim 52,** Thompson is directed to a computer program product for performing the above steps **(section 4.4),** specifically a Windows executable program.

Regarding claims 2, 19, 36, and 53:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model further includes at least one auxiliary node causally linked between at least one

evidence node and at least one conclusion node **(section 2.2 'Bayesian Network Models' paragraph 6)**.

Regarding claims 3, 20, 37, and 54:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the sampling is performed by a Monte Carlo algorithm **(section 3.2 paragraph 4 step 3)**.

Regarding claims 4, 21, 38, and 55:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states **(section 4.1 paragraph 1)**.

Regarding claims 5, 22, 39, and 56:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation **(section 4.1 paragraph 1)**.

Regarding claims 6, 23, 40, and 57:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states; whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions **(section 3.2 paragraph 8; section 4.2)**.

Regarding claims 7, 24, 41, and 58:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix and a three-dimensional bar chart **(figure 4; section 4.2; figure 5)**.

Regarding claims 8, 25, 42, and 59:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby the accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance **(section 3.2 paragraph 7)**.

Regarding claims 9, 26, 43, and 60:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain, with the conclusion nodes representing component failures or diseases, the evidence nodes representing recognizable symptoms of those failures or diseases, and the auxiliary nodes representing additional information useful, in conjunction with the evidence nodes and conclusion nodes **(section 2.2 paragraph 6)**.

Regarding claims 10, 27, 44, and 61:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model further includes at least one auxiliary node causally linked between at least one evidence node and at least one conclusion node **(section 2.2 'Bayesian Network Models' paragraph 6)**.

Regarding claims 11, 28, 45, and 62:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the sampling is performed by a Monte Carlo algorithm **(section 3.2 paragraph 4 step 3)**.

Regarding claims 12, 29, 46, and 63:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states **(section 4.1 paragraph 1)**.

Regarding claims 13, 30, 47, and 64:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation **(section 4.1 paragraph 1)**.

Regarding claims 14, 31, 48, and 65:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states; whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions **(section 3.2 paragraph 8; section 4.2)**.

Regarding claims 15, 32, 49, and 66:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix **(figure 4)** and a three-dimensional bar chart **(figure 5)**.

Regarding claims 16, 33, 50, and 67:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby an accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance **(section 3.2 paragraph 7)**.

Regarding claims 17, 34, 51, and 68:

Thompson is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain, with the conclusion nodes representing component failures or diseases, the evidence nodes representing recognizable symptoms of those failures or diseases, and the auxiliary nodes representing additional information useful, in conjunction with the evidence nodes and conclusion nodes **(section 2.2 paragraph 6)**.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claim 1, 2, 10, 16-19, 27, 33-36, 44, 50-53, 61, 67, and 68 are rejected under 35 U.S.C. 102(b)** as being clearly anticipated by **Skaanning et al. (US Pub. No. 2001/0011260)**, herein referred to as Skaanning.

Regarding claims 1, 18, 35, and 52:

Skaanning is directed to a method for automatically evaluating Bayesian network models for decision support comprising:

a. receiving a Bayesian Network (BN) model **(abstract)** including evidence nodes **(figure 7 nodes 520-530)** and conclusion nodes **(figure 7 node 500)**, where the conclusion nodes are linked with the evidence nodes by causal dependency links **(figure 7; [0027]; [0186])**, and where the evidence nodes have evidence states and the conclusion nodes have conclusion states **([0013])**. The prior art discloses an automated diagnosis system that utilizes Bayesian networks to model a system component causing failure of a system. The term *'conclusion node' in the instant application is interpreted to be analogous to the 'indicator node' in the prior art.* The specification of the instant application states that the conclusion nodes are all the nodes that are representative of the system failures **[51]**. The prior art discloses an indicator node that has a state that indicates whether the system component is causing a failure **([0028])**, and thus these nodes represent the failures of the system. The term *'evidence node' in the instant application is interpreted to be analogous to the cause and diagnostic nodes in the prior art.* As per the specification of the instant application, evidence nodes are all the nodes that model symptoms and test results **[51]**. The cause node in the prior art represents a cause of the system component producing a failure and each diagnostic step suggests an action to remedy causes represented by any cause node to which the diagnostic node is coupled.

b. setting the states of the conclusion nodes to desired conclusion states **(figure 4 step 900; [0073])** and determining, by propagating down the causal dependency links, a corresponding probability of occurrence of evidence states of the evidence nodes and producing, from the probability of occurrence, a plurality of samples of most likely states of the evidence nodes **(figure 4 907; [0108])**

c. setting the states of the evidence nodes to states corresponding to the plurality of samples of the evidence states **([0137])**, and propagating the evidence states back up the causal

dependency links to the conclusion nodes, to obtain a plurality of probabilities of the resulting states of the conclusion nodes (**[0133] – [0134]**)

d. outputting a representation of the plurality of the probabilities of the states of the conclusion nodes **[0259]**)

Regarding **claims 18, 35, and 52,** Skaanning is directed to an apparatus and computer program product for performing the above steps (**[0070]**.

Regarding claims 2, 10, 19, 27, 36, 44, 53, and 61:

Skaanning is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model further includes at least one auxiliary node **(figure 7 node 501; [0195] – [0199])** causally linked between at least one evidence node **(figure 7 nodes 520-530)** and at least one conclusion node **(figure 7 node 500)**.

Regarding claims 16, 33, 50, and 67:

Skaanning is directed to a method for automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby the accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance (**[0148] – [0154]**). The cost function is estimated using multiple factors (**[0148]**)), such as risk (**[0150]**) and money (**[0151]**). The factors are converted and are then balanced accordingly *(weighted)* and added (**[0154]**).

Regarding claims 17, 34, 51, and 68:

Skaanning is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain **(abstract)**, with the conclusion nodes representing

component failures or diseases (**[0028]**), the evidence nodes representing recognizable symptoms of those failures or diseases (**[0028]**), and the auxiliary nodes representing additional information useful in conjunction with the evidence nodes and conclusion nodes **(figure 7 node 501; [0195] – [0199])**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claim(s) 3-9, 11-15, 20-26, 28-32, 37-43, 45-49, 54-60, and 62-66 are rejected under 35 U.S.C. 103(a)** as being unpatentable over **Skaanning et al. (US Pub. No. 2001/0011260)**, herein referred

to as Skaanning, **in view of Murphy ('Dynamic Bayesian Networks: Representation, Inference and Learning').**

Regarding claims 3, 11, 20, 28, 37, 45, 54, and 62:

Skaanning does not disclose a method for automatically evaluating Bayesian network models for decision support, wherein the sampling is performed by a Monte Carlo algorithm. Murphy teaches performing Bayesian sampling using the Monte Carlo method **(Murphy: section 5.1 'Introduction').** At the time of the invention, it would have been obvious to one or more of ordinary skill in the art to combine the teachings of Skaanning and Murphy because the Monte Carlo method are easy to implement, they work on almost any kind of model, and they are guaranteed to give the exact answer **(Murphy: section 5.1 paragraph 2).**

Regarding claims 4, 21, 38, and 55:

The combination of Skaanning and Murphy as applied to claims 3, 20, 37, and 54 above teach an outputted representation that is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states **(Murphy: figure 5.9).**

Regarding claims 5, 22, 39, and 56:

The combination of Skaanning and Murphy as applied to claims 4, 21, 38, and 55 above teach a graphical outputted representation **(Murphy: figure 5.9).**

Regarding claims 6, 23, 40, and 57:

The combination of Skaanning and Murphy as applied to claims 4, 21, 38, and 55 above teaches automatically evaluating Bayesian network models for decision support, where the outputted

representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states, whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions **(Murphy: page 176 first paragraph).**

Regarding claims 7, 24, 41, and 58:

The combination of Skaanning and Murphy as applied to claims 6, 23, 40, and 57 above teaches automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix **(Murphy: figure 5.9)**, and a three-dimensional bar chart **(Murphy: figures 4.3 and 4.4)**

Regarding claims 8, 25, 42, and 59:

Skaanning is directed to a method for automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby the accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance **([0148] – [0154])**. The cost function is estimated using multiple factors **([0148])**, such as risk **([0150])** and money **([0151])**. The factors are converted and are then balanced accordingly *(weighted)* and added **([0154])**.

Regarding claims 9, 26, 43, and 60:

Skaanning is directed to automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain **(abstract)**, with the conclusion nodes representing component failures or diseases **([0028])**, the evidence nodes representing recognizable symptoms of those failures or diseases **([0028])**, and the auxiliary nodes representing additional information useful in conjunction with the evidence nodes and conclusion nodes **(figures 7 and 8; [0195] – [0199])**.

Regarding claims 12, 29, 46, and 63:

Skaanning does not disclose a method for automatically evaluating Bayesian network models for decision support, as set forth in claim 1, wherein the outputted representation is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states. Murphy teaches an outputted representation that is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states **(Murphy: figure 5.9).** At the time of the invention, one of ordinary skill in the art would have obviously combined the teachings of Skaanning and Murphy because the algorithm presented by Murphy can be performed in a short amount of time **(Murphy: 'Introduction').**

Regarding claims 13, 30, 47, and 64:

Skaanning does not disclose a method for automatically evaluating Bayesian network models for decision support as set forth in claim 1, wherein the outputted representation is a graphical representation. Murphy teaches a graphical outputted representation **(Murphy: figure 5.9).** At the time of the invention, one of ordinary skill in the art would have obviously combined the teachings of Skaanning and Murphy because the algorithm presented by Murphy can be performed in a short amount of time **(Murphy: 'Introduction').**

Regarding claims 14, 31, 48, and 65:

Skaanning does not disclose a method for automatically evaluating Bayesian network models for decision support as set forth in claim 1, wherein the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states; whereby a user can determine an accuracy of the BN model's propensity to yield proper

conclusions. Murphy teaches automatically evaluating Bayesian network models for decision support, where the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states, whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions **(Murphy: page 176 first paragraph).** At the time of the invention, one of ordinary skill in the art would have obviously combined the teachings of Skaanning and Murphy because the algorithm presented by Murphy can be performed in a short amount of time **(Murphy: 'Introduction').**

Regarding claims 15, 32, 49, and 66:

Skaanning does not disclose a method for automatically evaluating Bayesian network models for decision support as set forth in claim 1, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix and a three-dimensional bar chart. Murphy teaches automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix **(Murphy: figure 5.9)**, and a three-dimensional bar chart **(Murphy: figures 4.3 and 4.4).** At the time of the invention, one of ordinary skill in the art would have obviously combined the teachings of Skaanning and Murphy because the algorithm presented by Murphy can be performed in a short amount of time **(Murphy: 'Introduction').**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shambhavi Patel whose telephone number is (571) 272-5877. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shambhavi Patel whose telephone number is (571) 272-5877. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

KAMINI SHAH
SUPERVISORY PATENT EXAMINER